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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,240	12/12/2000	Paul Maurice Burling	GJE-01720	3687

7590

11/14/2002

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EXAMINER

BLANTON, REBECCA A

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 11/14/2002

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,240

Applicant(s)

BURLING, PAUL MAURICE

Examiner

Rebecca A. Blanton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-35, 40-49, 51 and 52 is/are rejected.
- 7) ☒ Claim(s) 36-39 and 50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 7, 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Applicant's election without traverse of claims 28-52 in Paper No. 13 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 51 recites the limitation "the honeycomb structure" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 28-35, 40-49, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gajardo et al. (U.S. 3,203,813).

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Regarding claims 28, 32-35, and 40-41, Gajardo et al. disclose a process of making a heat-insulating material by coating particles with a dispersion of binder (column 1 lines 10-15). The reference teaches that the insulating particles are composed of an aggregate in an inorganic binder, wherein the aggregate may comprise vermiculite (column 1 lines 55-59 and column 2 lines 14-25). Once the particles are mixed with the binder, the reference teaches that the composition is cured through heat treatment (column 6 lines 10-13). Additionally, Gajardo et al. teach that the coated particles are coated onto a substrate to provide heat resistance to the substrate (column 6 lines 1-18). Gajardo et al. does not disclose the size of the vermiculite particles. However, this is a known result effective variable. If the particles are too small they will not provide an effective heat-resistant coating because the thickness of the coating will be too small. If the particles are too large, they will adversely affect the appearance of the substrate by creating a non-smooth surface in addition to forming air pockets between the particles, which prevent the coated particles from providing maximum heat resistance to the substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the optimum size of the vermiculite particles to be coated with a binder and spread onto a substrate, as taught by Gajardo et al., through routine experimentation in the absence of unexpected results, to ensure maximum heat-resistance of the substrate without marring the appearance of the substrate.

Regarding claims 29-31, Gajardo et al. teach that the coated particulate mixture may first be molded or applied directly to a substrate as insulation

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followed by drying or curing the coating mixture by heating it to a temperature of 300°F - 500°F (column 6 lines 1-18).

Regarding claims 42-43, 46-49, and 52, the reference discloses a process for forming vermiculite particles that are coated with a binder and then coated onto a substrate surface as a heat-resistant coating (column 6 lines 1-27).

Referring to claim 44, Gajardo et al. disclose the presence of fiberglass fibers in the binder composition so as to reinforce the strength of the final product (column 4 lines 62-67).

Regarding claim 45, Gajardo et al. teach that the binder that is applied to the vermiculite particles is first foamed so that air bubbles exist throughout the binder composition (column 5 lines 50-67). The foam is then applied to the vermiculite particles, which are coated onto a substrate, followed by curing the particulate composition so as to form a porous coating upon the substrate (column 6 lines 1-51).

Allowable Subject Matter

Claims 36-39, and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 36-39, the applicant's limitation that a binder, which is coated onto vermiculite particles to provide a heat-resistant composition, comprises the adhesive portion of a two-part binder distinguishes over Gajardo et al. because the reference merely teaches using a one-part ceramic binder that is coated onto vermiculite particles to form heat-resistant particles.

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Regarding claim 50, the applicant's limitation of applying vermiculite particles that have been coated with a ceramic binder to a phenolic glass laminate sandwiched between a honeycomb structure and the vermiculite particles distinguishes over Gajardo et al. because the reference makes no mention of applying the coated vermiculite particles to a phenolic glass laminate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. 4,172,744 to Ishikawa: The reference discloses a process for forming a heat-resistant composite by applying an inorganic binder to vermiculite particles.

U.S. 4,175,159 to Raleigh: The reference discloses a process for forming a silicone-resin coating upon vermiculite particles.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca A. Blanton whose telephone number is 703-605-4295. The examiner can normally be reached on M - F (7:30am - 3:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on 703-308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

rab *RB*
November 8, 2002


MICHAEL BARR
PRIMARY EXAMINER